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TELECOMUNICAZIONI

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GSM400

User's manual

29/05/2013

CE

Thanks for choosing an Esse-ti product

This product has been especially designed for easy operation. It has been manufactured with perfect workmanship using suitable materials for long-lasting performance.
All Esse-ti products are subjected to extensive reliability and operational testing in our laboratories in order to provide total guarantee for the user.

The User shall be responsible for defects arising from the use of the product. Esse-ti shall only be responsible for defects according to and within the limitations set by the Presidential Decree dated 24/05/1988 no. 224 (fulfilling the EEC directive no. 85/374 on the harmonization of statutory and administrative regulations of the Member States on the liability for damages arising from defective products under art. 15 of Law no. 183 of 16 April 1987).

Esse-ti reserves the right to modify the product characteristics at any time without prior notice.

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GENERAL INSTALLATION INSTRUCTIONS

GENERAL NOTES

Carefully read the notes contained in this section as they provide important information on safe correct installation, use and maintenance of the product.

- The product must be EXCLUSIVELY used for the purpose it was designed for. Esse-ti shall not be responsible for damages arising from improper use.
- The product has been designed in compliance with the regulations in force and must be installed in systems that comply with the provisions of law.
- Always disconnect power supply before performing internal or external operations on the product (cleaning, maintenance, etc.).
- Always refer to an authorized service centre for repair.
- The device must be installed in a ventilated place, making sure that the ventilation slots are never obstructed.
- Do not install the product in environments with risk of explosion.
- Make sure that the product has been installed as required.
- Do not introduce objects, liquids or powders inside the product. Do not use sprays inside the product.
- Packing components (such as plastic bags, foam polystyrene, etc.) must be kept out of the reach of children because potentially dangerous.

MAKING THE INSTALLATION

Internal telephone installations must be carried out by specialised personnel.
The installation and connection of telephone terminals to the telecommunications network that do not comply with the regulations in force is not permitted.

DESCRIPTION

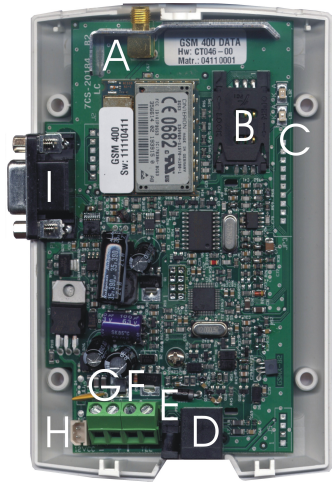
GSM400 is a device that, connected to a fixed telephone or to the PSTN input terminals of a PABX or autodialer, allows you to make and receive calls over the GSM network. For correct operation, a normal SIM card is required. The **GSM400 GC** gateway comes with built-in backup batteries. The **GSM400 DATA** gateway comes with built-in backup batteries and serial port RS232 for data transmission.

Features

- Local programming via DTMF tones;
- Remote programming via SMS;
- Display of caller identification;
- CLIP / CLIR;
- Roaming setting;
- Low-battery check (only available on models: GC and DATA);
- Low-battery notification by SMS;
- Measurement of GSM signal level;
- Automatic converter of selected telephone number;
- Receiver and transmitter gain adjustment;
- Remote reboot function;
- GSM signal indicator LED;
- Status indicator LED;
- Dual Band GSM module;
- 2W transmission power;
- 12Vdc power supply input;
- 230Vac external adapter input;
- RS232 port for data transmission (only available on model: DATA);
- External antenna (cable length = 2,5m);
- Optional external adapter (230Vac 50Hz input; 12Vdc 500mA output; CE mark).

INSTALLATION

- Remove the cover by pressing the upper side.



A ANTENNA cable connector
B SIM CARD housing with front panel
C LED indicating signal strength (green) and LED indicating device operation status (red)
D Telephone line output (RJ11 connector) for telephone set connection or PABX analogue line connection
E 230Vac external adapter input
F Telephone line output (terminal block) for connection of autodialer/PABX analogue line
G 12Vdc power supply terminal block
H Backup battery connector (GC and DATA models only)
I RS232 port (DATA model only)

Inserting the SIM card

Before inserting or replacing the SIM card, always make sure that the gateway has been disconnected from the mains and that no electrostatic discharge is present in order to avoid damaging it.

Take all necessary measures to avoid electrostatic discharge.

- Shift the SIM card housing cover downward until it unblocks and lift it.
- Carefully slide the SIM card into its housing cover.
- Lower the SIM card housing cover and shift it upward until it blocks.

WARNING
The SIM Card PIN must be DISABLED. If the PIN is enabled, it must be disabled through a mobile phone.

Inserting the antenna

- Screw the antenna cable in to the connector on the top of the module.

WARNING
Do not install the product near other electric or electronic devices that were not especially designed to be used with it. They could be subjected to RF interference from the module.

WARNING
NEVER connect the GSM400 gateway without having previously installed the antenna. The gateway may get damaged.

Connection to the telephone line

- Connect the GSM400 to a standard telephone or to the PSTN input terminals of a PABX or autodialer via the RJ-11 connector (D in the picture at page 7);

or

- Connect the GSM400 to a standard telephone or to the PSTN input terminals of a PABX or autodialer using the TEL terminal (F in the picture at page 7).

Connection to the power supply

Power supply via 230Vac external adapter

- Connect the external adapter to the specific input (E in the picture at page 7).
- Connect the backup batteries (if present) to the dedicated input (H in the picture at page 7).
- Close the gateway cover.

or

12Vdc power supply

- Connect the power supply cable to the terminal (G in the picture at page 7) taking care to respect the polarity.
- Connect the backup batteries (if present) to the dedicated input (H in the picture at page 7).

- Close the gateway cover, paying attention to the power supply cable.

WARNING
Backup batteries, if present, may be connected only <u>after</u> GSM400 has been supplied

Note: the max voltage to be supplied to the mains terminal G is 17Vdc.

Note: the min voltage required to supply the GSM400 gateway by the mains terminal G is 10Vdc.

Note: a protection cut-out switch must be installed upstream to interrupt power supply in case of fault.

Turning the GSM400 gateway on

- Power the GSM400.
- Wait 15 seconds after power-up to give time to the GSM400 to register correctly with the GSM network.
- Make sure the red LED (device status) flashes briefly once every 3 seconds as shown in chapter "SIGNALS".
- Set parameters or make a call.

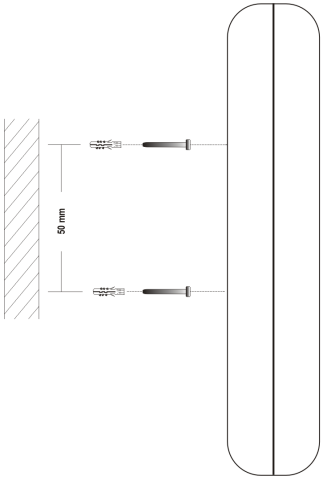
If the red LED flashes quicker and stays lit for a longer time (see "SIGNALS"), the GSM gateway has not properly registered with the GSM provider. Disconnect GSM400 and make sure the SIM card is inserted correctly and that the PIN is not locking it.

Gateway mounting operations

- Check the GSM signal strength through the green indicator LED (see "SIGNALS") and identify an area where the signal is strong enough.

  Note: the signal strength may vary according to the telephone provider.

- Drill two holes with 5 mm diameter on the wall at a distance of 50 mm.
- Insert the 2 fischers and screw down until the screws are at a 5 mm distance from the wall.
- Place the GSM400 gateway onto the two screws through the two back slots.



GSM400 installation recommendations

- The GSM400 gateway must be installed in a location where the radio signal allows for using the GSM system.
- It is advisable to leave plenty of space around the gateway for maintenance operations.
- Do not install the GSM400 gateway outdoors, since it lacks protection devices against weather conditions that can damage the gateway (water, humidity, etc.).
- Do not install the GSM400 gateway near electronic (radio or TV sets, Personal Computers, wired radio systems, etc.) or magnetic (credit cards, floppy disks, etc.) devices that could be subjected to RF interference from the module: recommended distance from the antenna is min. 2.5 m.
- Do not install the GSM400 gateway near medical devices. Its operation may cause damage to hearing aids or pacemakers.
- Always make sure that the device operation is permitted in the place of installation (i.e. installation is not allowed in hospitals, airplanes, etc.).

Absorption chart

Power supply	10Vdc	12Vdc	13,8Vdc
Telephone handset down	30mA	25mA	25mA
Telephone handset up	85mA	70mA	60mA
Conversation	160mA	130 mA	120mA

PROGRAMMING VIA TELEPHONE

Allows you to customise the gateway according to your requirements. Programming can be carried out locally via a MF telephone.

You can programme:

- voltage of telephone line;
- use mode;
- interdigit dialling time;
- country calling code and international call prefix;
- CLIP/CLIR settings;
- roaming service settings;
- notifications telephone number;
- administrator telephone number ;
- programming-mode password;
- low-battery check;
- automatic converter of selected telephone number;
- receiver gain adjustment;
- transmitter gain adjustment.

Note: during programming, the interdigit dialling time must not exceed the time set during the "Interdigit dialling time" programming. Once this programmed time has elapsed you will hear the dissuasion tone and you will have to hang up.

Note: at the end of each programming carried out correctly, you will hear a confirmation tone, while an error tone will be heard in case of error. In any case, the dialling tone will follow, after which you can proceed with the programming or make a call.

Note: programming can be carried out even if the signal is absent. After the confirmation or the error tones, the "no signal" tone will follow, after which you can proceed with programming or hang up.

VOLTAGE OF THE TELEPHONE LINE

The following programming allows you to modify the voltage in the TEL terminal and in the RJ-11 connector. A higher voltage may be required for the proper functioning of specific devices.

Factory default: lower voltage (36Vdc).

****61*** X (option) # (confirm)

- Lift the handset and dial: ****61***.
- Enter:
  - 0 lower voltage (36Vdc);
  - 1 higher voltage (52Vdc).
- Dial # to confirm.
- After the confirmation tone hang up or enter additional settings.

Note: do not change factory default unless it is strictly necessary.

USE MODE

It allows to indicate whether the device is connected to the input terminals of an autodialer or a PABX or directly to an analogue telephone set.
Factory default: telephone / PABX.

Setting telephone / PABX mode

- Lift the handset and dial: **21.
- Dial # to confirm.
- After the confirmation tone hang up or enter additional settings.

Setting autodialer mode

- Lift the handset and dial: **22.
- Dial # to confirm.
- After the confirmation tone hang up or enter additional settings.

INTERDIGIT DIALLING TIME

The interdigit time is the maximum amount of time allowed between digits while dialling a telephone number or a programming code.
There are 2 ways to make outgoing calls:

- Dial the telephone number and then press # to confirm. The call is sent immediately.
- Dial the telephone number and wait. The call will be sent after the interdigit time has elapsed.

If you wish to use the second way, it could be useful to modify the interdigit time, in order to quicken the calling procedure.
Factory default: 5 seconds.

✳✳8✳ X (interdigit time) # (confirm)

- Lift the handset and dial: **8*;
- Dial the interdigit dialling time:
  - 0 interdigit time: 10 seconds;
  - 1-9 interdigit time from 1 to 9 seconds.
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

DIALLING CODES

This programming is necessary for the correct operation of the caller number display service (CLI). It allows displaying the caller's telephone number without the area code.

International call prefix

The international call prefix is the first part of a country's code. For example, the international dialling code for Italy, whose complete code is 0039, is 00.

Factory default: 00.

[*][*][0][8][*] [X]...[X] (international call prefix) [#] (confirm)

- Lift the handset and dial: **08*;
- Dial the international call prefix (max. 5 digits).
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

Country calling code

The country calling code is the second part of a country's code. For example, the country calling code for Italy, whose complete code is 0039, is 39.

Factory default: 39.

**09* X...X (country calling code) (confirm)

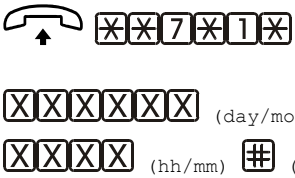
- Lift the handset and dial: **09*;
- Dial the country calling code (max. 5 digits).
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

CLIP SETTING

Upon an incoming call, if a telephone connected to the GSM400 is provided with a display, it will show the CLI (caller identification). Moreover, on some telephones and some switchboards, it is also possible to display date and time of the call. With this programming you can determine whether to show the date and time of the call in addition to the caller's number.

Factory default: date and time not displayed.

Activation



- Lift the handset and dial: **7*1*.
- Dial the day (two digits), the month (two digits) and the year (two digits).
- Dial *.
- Dial the hour (two digits); dial the minutes (two digits).
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

Note: if the GSM400 gateway remains off for a long time, it will be necessary to repeat the activation procedure; otherwise the date and time displayed could be incorrect.

Deactivation

- Lift the handset and dial: **7*0.
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

CLIR SETTING

Permanent setting

Thanks to this programming you can decide whether to send out your telephone number during outgoing calls.

Factory default: operation based on the service provided by your provider.

- Lift the handset and dial: **6*.
- Enter:
  - 0 operation based on the service provided by your provider;
  - 1 restriction active;
  - 2 restriction not active.
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

Note: if you choose option 1 your telephone number will not appear on the call recipient's display.

Temporary setting

The following programming allows you to modify the CLIR permanent setting for one call only.

Enabling restriction for a call

Initial situation: CLIR restriction not active.

This programming allows you to activate the CLIR restriction for the immediately subsequent call.

- Lift the handset and dial:**16.
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

Disabling restriction for one call

Initial situation: CLIR restriction active.

This programming allows you to deactivate the CLIR restriction for the immediately subsequent call.

- Lift the handset and dial:**17.
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

ROAMING SETTING

It allows to enable or disable the roaming function of the GSM400 gateway.

When the roaming service is disabled, in case the GSM400 registers with a different provider than the programmed, it is not possible to make or receive any calls. Such a condition is signalled by the following tone sequence:

Factory default: roaming enabled.

Note: such setting is recommended for use under neighbouring-countries areas, in order to avoid the undesired selection of foreign operators.

Note: the roaming service is enabled by factory default.

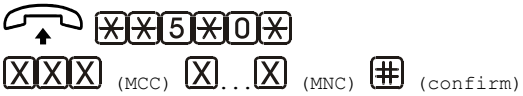
Enabling roaming service

✳✳5✳1 # (confirm)

- Lift the handset and dial: **5*1.
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

Disabling roaming service

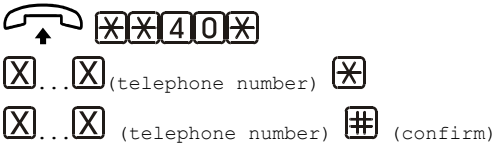
It allows to select a specific SIM's provider by disabling the GSM400's operation with any other provider .



- Lift the handset and dial: **5*0*.
- Select the specific SIM's provider by dialling the related MCC (Mobile Country Code) and MNC (Mobile Network Code) codes.
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

SETTING TELEPHONE NUMBER FOR NOTIFICATION SERVICE

It allows to enter the telephone number appointed for low-battery and battery status notifications by SMS.



- Lift the handset and dial: **40*.
- Enter the telephone number to which the notification SMS must be sent.
- Dial *.
- Enter again (for confirmation) the telephone number to which the notification SMS must be sent.
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

Deleting

It allows to delete the telephone number appointed for SMS notifications or warnings.

- Lift the handset and dial: **40.
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

SETTING THE ADMINISTRATOR TELEPHONE NUMBER

SMS programming mode may be effected by any mobile phone or other device sending out SMS. After setting the administrator telephone number, programming mode by SMS is only allowed by the administrator's telephone number.

Note: once it has been entered, the administrator number will receive the notification SMS related to the "Automatic converter" service.

****18*** **X...X** (telephone number)

***** **X...X** (telephone number) **#** (confirm)

- Lift the handset and dial: **18*.
- Enter the administrator telephone number.
- Dial *.
- Enter the administrator telephone number again (for confirmation)
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

Deleting

It allows to delete the administrator telephone number.

****18** **#** (confirm)

- Lift the handset and dial: **18.
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

PROGRAMMING PASSWORD

It allows to change the password appointed for SMS programming mode and for "Automatic converter" service.

Factory default: 0.

Note: make sure the password has been noted down. In case it is lost, please contact the nearest technical service center.

****19* XXX** (password) *** XX X** (password) **#** (confirm)

- Lift the handset and dial: **19*.
- Enter the new programming password (max. 3 digits).
- Dial *.
- Enter the new password again (for confirmation).
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

LOW-BATTERY CHECK

If the low-battery check is enabled, GSM400 checks the battery status every second. When the charge goes below the previously-programmed threshold ensuring the minimum number of operating hours in idle mode, a notification SMS is sent to the programmed telephone number (see "Setting telephone number for notification service"). The device sends out one notification SMS only. A new SMS will be sent out if the charge status rises and goes again below the previously-set threshold. The SMS text is the following: "*Batteria scarica*" (Low battery).

The low-battery check is only available on models: GC and DATA.

The built-in backup batteries ensure 8 operating hours in idle mode and 1 operating hour in conversation mode.

Factory default: disabled.

Enabling

It allows to activate the low-battery check.

Enabling

- Lift the handset and dial: **50.
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

Disabling

- Lift the handset and dial: **51.
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

Programming the minimum value

It allows to set the min. number of operating hours in idle mode. Below this threshold, a notification SMS is sent out.

Factory default: 4 hours.

- Lift the handset and dial: **52*.
- Enter the value (0 ~ 9) according to the table below:

0	1	2	3	4	5	6	7
7h	6h e 30'	6h	5h e 30'	4h	2h e 30'	1h e 30'	1h

- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

AUTOMATIC CONVERTER OF SELECTED TELEPHONE NUMBER

This service allows to enter up to 5 telephone numbers automatically receiving any outgoing call, regardless of the real telephone numbers dialed out by the telephone or autodialer connected to the GSM400 gateway.

Each preset telephone number is matched with a corresponding telephone number , either by programming and/or automatic learning. When dialing out the corresponding telephone number , the GSM400 will make a call to the previously-matched telephone number instead of calling the real one. When dialing out a telephone number not associated with any preset number, the call will be automatically forwarded to the first preset telephone number.

Note: to enable the "Automatic converter" service, you simply need to preset one telephone number; to disable this service, all preset telephone numbers must be deleted.

Example:
preset table:

Location	Selected tel. number	Preset tel. number
1	3331234567	0717506065
2	3339876543	0717506066
3	0733434343	0717506067
4	0733445566	0717506068
5	0733778899	0717506069

- when selecting tel. number 3331234567, the GSM400 will make a call to 0717506065;
- when selecting number 3339876543 , the GSM400 will make a call to 0717506066;
- etc;
- when selecting any number not included in the "Selected

telephone number" column, GSM400 will send a call to the first telephone number included in the "Preset telephone number" column.

Entering preset numbers

It allows to enter up to 5 telephone numbers receiving any outgoing call sent out by GSM400.

**26* XXX (password) * X (location) *
X...X (telephone number) *
X...X (telephone number) # (confirmation)

- Lift the handset and dial : **26*.
- Enter the programming password.
- Dial: *.
- Enter the desired telephone number location (from 1 to 5) in the related table.
- Dial *.
- Enter the telephone number to be preset.
- Dial *.
- Enter again the telephone number to be preset.
- Dial # to confirm the entered parameter.
- After the confirmation tone hang up or carry on with other programmings.

Deleting a preset telephone number

It allows to delete a preset telephone number.

- Lift the handset and dial: **26*.
- Enter the programming password.
- Dial *.
- Enter the location of the telephone number to be deleted.
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

Deleting all preset telephone numbers.

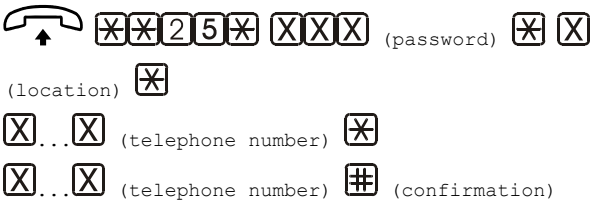
It allows to delete all the preset telephone numbers.

- Lift the handset and dial: **26*.
- Enter the programming password.
- Dial *.
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

Matching telephone numbers manually

It allows to associate a specific telephone number to each preset number.

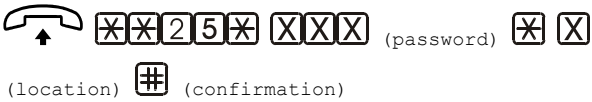
Note: in case no telephone number is manually matched to any preset number, the association is automatically carried out by auto- learning procedure.



- Lift the handset and dial: **25*.
- Enter the programming password.
- Dial *.
- Enter the position of the preset number to be matched, 1 to 5.
- Dial *.
- Enter the telephone number to be matched.
- Dial *.
- Enter again the telephone number to be matched.
- Dial # to confirm the entered parameter.
- After the confirmation tone hang up or carry on with other programmings.

Deleting a previously matched telephone number.

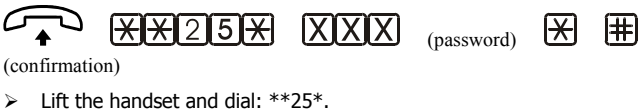
It allows to delete a telephone number previously matched with a preset number.



- Lift the handset and dial: **25*.
- Enter the programming password.
- Dial *.
- Enter the location of the telephone number to be deleted, 1 to 5.
- Dial # to confirm
- After the confirmation tone hang up or carry on with other programmings.

Deleting all previously-matched telephone numbers.

It allows to delete all previously-matched telephone numbers associated with preset numbers.



- Lift the handset and dial: **25*.
- Enter the programming password
- Dial *.
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

Matching telephone numbers automatically

The auto-learning procedure allows to match automatically each preset number with the selected numbers dialed by the telephone and/or autodialer connected with GSM400.

- Enter the preset numbers after the corresponding programming codes.
- Select a telephone number to be called by the telephone or autodialer connected with the GSM400 module.

GSM400 will check if the number is already matched with a preset telephone number. If so, it will send a call to the preset number; if not, it will match the selected number to the first available preset number and will make a call to it.
In case there are not available preset numbers, but it's still possible to make associations, the selected number will be automatically matched with the first preset number.
In case all 5 possible associations have been effected, the call will be sent to the first preset number.

An SMS containing the selected number and the preset number is sent out to the administrator number (if present) upon creating any new matching.

An SMS is also sent out every time a different selection from the 5 preset ones is effected.

ADJUSTMENTS

This programming allows you to adjust the receiver gain as well as the transmitter gain.

WARNING
The factory-default settings are optimal values, please do not change them unless it is strictly necessary.

Transmission

Factory default: +12dB.

- Lift the handset and dial: **10*.
- Enter the value (1 ~ 7) according to the table below:

1	2	3	4	5	6	7
+4dB	+6dB	+10dB	+12dB	+15dB	+17dB	+18dB

- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

Reception

Factory default: -10dB.

- Lift the handset and dial: **11*.
- Enter the value (1 ~ 5) according to the table below:

1	2	3	4	5
-14dB	-12dB	-10dB	-8dB	-6dB

- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

RESTORING DEFAULT SETTINGS

It is possible to restore the factory - default settings at any time, by dialling:

✳✳99# (confirm)

- Lift the handset and dial: **99.
- Dial # to confirm.
- After the confirmation tone hang up or carry on with other programmings.

The factory-default values are:

Telephone line voltage	36Vdc
Use mode	PABX / telephone
Interdigit dialling time	5s
International call prefix	00
Country calling code	39
CLIP	disabled
CLIR	depends on the provider
Roaming	enabled
Low-battery check	disabled / 4h
Transmitter gain	+12dB
Receiver gain	-10dB

Note: restoring factory default does not modify the password and the settings entered for the "Automatic Converter" service.

RESET

You can reset the GSM400 gateway at any time, without powering it off, with the following code:

****98#** (confirm)

- Lift the handset and dial: **98.
- Dial # to confirm.
- Hang up.

Note: resetting the GSM400 gateway does not modify its programming profile.

PROGRAMMING VIA SMS

Programming via SMS is possible by any mobile phone or other device supporting SMS. In case the administrator number has been previously set, programming via SMS is only allowed from such telephone number. An SMS notifying that programming has been completed will be sent back by the GSM400 to the same telephone number that forwarded the programming SMS.

WARNING
Programming outgoing SMS from the Internet may not be successful if the requested format is not respected.

Message format

Each programming SMS must contain the password, allowing to access programming, and the codes corresponding to the desired settings.
The message format is required to be as follows:

ET-IG4*xxx#c..c#

where:
ET-IG4 : programming string start
*xxx# : password string (default xxx = 0)
c..c : programming string as per table below
: separator character or end string character

Programming	Code (c..c)
Telephone line voltage	61*X
Telephone / PABX mode	21
Autodialer mode	22
Interdigit dialling time	8*X
International call prefix	08*X..X
Country calling code	09*X..X
CLIP activation	7*1*ggmmaa*hhmm
CLIP deactivation	7*0
CLIR permanent setting	6*X
CLIR temporary activation	16
CLIR temporary deactivation	17
Enabling roaming service	5*1
Disabling roaming service	5*0*XXXYYY
Setting telephone number for notification service	40*X…X*X…X
Deleting notification numbers	40
Setting administrator number	18*X…X*X…X
Deleting administrator number	18
Setting programming password	19*XXX*XXX
Low-battery check enabling	50
Low-battery check disabling	51
Low-battery check minimum value	52*X
Entering preset number	26*XXX*X*X…X*X…X
Deleting preset number	26*XXX*X
Deleting all preset numbers	26*XXX*
Reading preset numbers	26*XXX*XR
Entering selection	25*XXX*X*X…X*X…X
Deleting selection	25*XXX*X
Deleting all selections	25*XXX*
Reading selections	25*XXX*XR
Transmitter gain setting	10*X
Receiver gain setting	11*X
Restoring default settings	99
Reset	98
Measuring the GSM signal level	30
Reading battery status	91

For each programming refer to the relevant paragraph.

Example:
it is required to enable low-battery check and to set the telephone number for notifications.

Outgoing message text:
*ET-IG4*0#50#40*X..X*X…X#*

Notification message format

The format of the message notifying the user or the administrator who previously sent out a programming SMS, is the same as the programming message format.
SMS notifying an accepted command:

ET-IG4*xxx#c..c#

SMS notifying a rejected command:

ET-IG4*xxx#c..cERR#

Example:
outgoing SMS to enable low-battery check and to set the following incoming notification number: 3330123456.

Outgoing message text:
*ET-IG4*0#50#40*3330123456*3330123456#*

Message text notifying accepted command:
*ET-IG4*0#50#40*3330123456*3330123456#*

SERVICES

INCOMING CALLS

Allows you to answer incoming calls.

- The telephone rings.
- Pick up the handset; conversation with a remote party starts.

OUTGOING CALLS

Allows you to dial over the GSM network. If the GSM400 gateway is connected to a PABX, please refer to the switchboard's manual.
If the GSM400 gateway is connected to a telephone:

- Pick up the handset.

You will hear the dialling tone.

- Dial the telephone number to be called.

Note: once you have dialled the number, you can either press # to send the number immediately, or you can wait for the call to be automatically forwarded once the interdigit dialling time has elapsed (by default 5 seconds).

Note: in the event you receive the "no signal" tone picking up the handset, check if the signal is present and make sure the SIM Card is working correctly.

MEASURING THE SIGNAL LEVEL

This procedure allows you to check the GSM signal level through your telephone.

(tones)

- Lift the handset.
- Dial: **30#;
- Wait for the signal reading.

The system will send a number of short tones corresponding to the signal level:

Tones	Quality
No signal	No signal
1 Tone	Low
2 Tones	Medium
3 Tones	Good
4 Tones	High

Since the signal can be subject to variations, we recommend repeating the code **30#, 2 or 3 times a few seconds apart, in order to have a reliable measurement.

Note: in case of low signal, we recommend installing the GSM400 in a different area with a better signal.

Note: if you receive the "no signal" tone, it means that the gateway has not been registered correctly by the provider. We recommend trying again after a few moments, and in case of no result, make sure that the SIM Card is working correctly.

READING THE BATTERY STATUS

If the low-battery check has been previously enabled, it is possible to check the battery status.

****91#** (confirm)

- Lift the handset and dial: ****91#.**
- After the confirmation tone hang up.

After receiving the request, GSM400 will send an SMS to the number programmed to be alerted.

The outgoing message text is the following: "*Carica batteria (Battery charge): x*", where x is the value corresponding to the minimum number of operating hours guaranteed by the battery in idle mode, according to the table at paragraph "Low-battery check".

The request will not be accepted (an error tone will be received) if the low-battery check is disabled, if the notification number to be alerted has not been previously entered or if the GSM400 is not correctly registered to the GSM network.

READING "AUTOMATIC CONVERTER" NUMBERS

It is possible to check remotely, via SMS, the preset numbers and the stored selected numbers (see chapter "Programming via SMS" for the use of SMS).

Reading preset numbers

The programming code to be contained in the message text must be the following :

where:

XXX: programming password

X: preset number location

Reading previously selected numbers

The programming code to be contained in the message text must be the following:

dove:

XXX: programming password

X: selected number location

An answer message will be returned to user or the system administrator who sent out the SMS.

Example :
an SMS has been sent out to ascertain the preset number stored at location 1 (071123456).

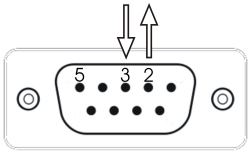
Outgoing message text:
*ET-IG4*0#26*0*1R#*

Ansie message text:
*ET-IG4*0#26*0*1R071123456#*

RS232 PORT

The RS232 port allows to use the GSM400 for the connection and the two-way data transmission between devices equipped with serial communication (eg: pc and lift controller).

Note: the SIM card must be enabled for data traffic.

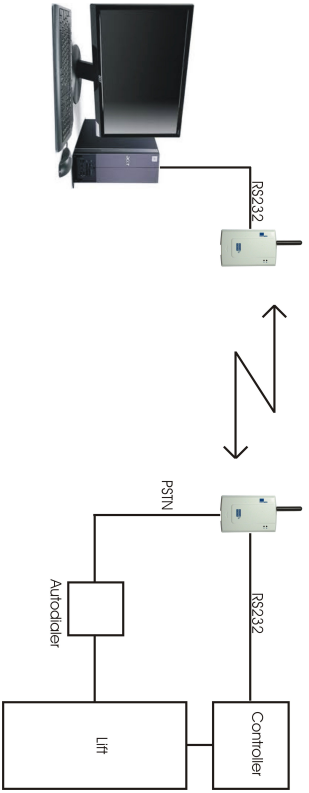


2: transmission from GSM400
to the connected device
3: GSM400 reception
5: ground

Port settings:

Bits per second **115200**
Parity **None**
Data bits **8**
Stop bits **1**
Flow control **None**

Connection example



SIGNALS

TONES

Dialling

Indicates that the GSM400 is ready for dialing.

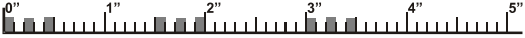
Dissuasion

Indicates: delay in dialing, end of conversation, access to services not permitted.

Busy

Indicates that the called party is busy.

Confirmation



Indicates that the requested service or programming has been accepted.

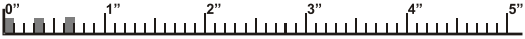
Error

Indicates that the requested programming has not been accepted.

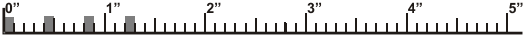
GSM signal level

Low signal level.

Medium signal level.



Good signal level.



High signal level.

No signal.

CALL SIGNALS

Indicates an incoming call.

LED

Status indicator LED (red)

Indicates network login in progress or GSM400 not correctly registered to the network or PIN enabled.

Indicates the GSM400 is correctly registered to the network.

Indicates connection (voice or data) in progress.

GSM signal indicator LED (green)

No signal.

Low signal level.

Medium signal level.

Good signal level.

High signal level.

NOTE

GSM400

29/05/2013

WARRANTY CONDITIONS

1. In order to claim warranty rights the purchaser must fill out the warranty certificate completely and enclose proof of purchase.

2. Esse-ti warrants this product under articles 128 and following of the legislative decree n° 206/2005. The warranty term is two years. Six months after the purchase date, the purchaser shall prove that the defect is attributable to faults existing upon delivery. Defects must be claimed within two months from identification. The manufacturer shall have the right to refuse free intervention in case of defects caused by improper use, incorrect installation for user's fault or external factors. Moreover, the manufacturer shall have the right to refuse assistance if defects are claimed two months after identification. The technical assistance under warranty shall be exclusively provided by Esse-ti service centers or by the mother company upon authorization from Esse-ti service centers.

3. The guarantee exclusively covers defects that cause product malfunctioning. The product under warranty must have the serial number indicated on the warranty certificate, otherwise the warranty shall be void. The term "warranty" shall exclusively mean free of charge repair or replacement of components identified as defective in manufacturing or materials, including workmanship.

4. The warranty shall not apply in case of damages caused by negligence, use or installation not compliant with instructions, damages caused by interventions of unauthorized personnel, damages caused by accidental causes and/or user's negligence, with particular reference to external parts. Moreover, the warranty shall not apply in case of faults caused by connecting the device to different voltages than indicated or sudden voltage variations in the mains, as well as in case of damages caused by inductive/electrostatic discharges or discharges due to lightening or other external phenomena.

5. The warranty shall not apply to parts subject to wear because of use, batteries (if supplied), connections cables and cords, connectors, external parts and plastic supports free of manufacturing defects.

6. The warranty does not include compensation of direct and indirect damages caused to individuals, objects and animals for use, misuse or suspended use during repair.

7. The guarantee shall expire 24 months after the purchase date. After this date, service shall be provided by charging the cost of replacements and workmanship according to the current rates.

8. The Court of Macerata shall have the exclusive jurisdiction in case of disputes.

WARRANTY CERTIFICATE

Model:

Serial N°:

Dealer's signature and stamp:

Proof of purchase:

Purchaser's signature:

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